Autumnwood ESH Consultants
6539 Autumnwood Court
Mount Pleasant, Wisconsin 53403
Phone: 262.237.1130

15 January 2019

Mr. John Nordine
U.S. EPA Region 5
RCRA Enforcement and Compliance Assurance Branch (LU-16)
77 West Jackson Boulevard
Chicago, Illinois 60604

Re: Central Wire, Union, Illinois RCRA CMI Monthly Progress Report, December 2019,
EPA ID: ILD005178975

Dear Mr. Nordine:

Enclosed please find the RCRA CMI Monthly Progress Report for the Central Wire, Inc. (CWI) facility located in Union, Illinois for December 2018.

This report includes the eDMR for the groundwater pump & treat facility, the NPDES laboratory analytical report, which includes the effluent data used in the eDMR and the **Ex. 6 Personal Privacy (PP)** analytical data for Volatile Organic Compounds. **Ex. 6 Personal Privacy (PP)** has been deactivated for the winter months.)

All the analytical data is included in the *12-2018 NPDES Analytical Report* file.

If you have any comments or questions regarding the progress of this project, please contact me at (262) 237-1130.

Sincerely,

Autumnwood ESH Consultants, LLC

John W. Thorsen, P.E.
JWT: jt
Encl
cc: Joyce Munie IEPA
Robert Kay USGS
Gerald W. Ruopp Central Wire
Robert Johnson Central Wire

MONTHLY PROGRESS REPORT

Central Wire Union, Illinois Site

December 2018

1 Progress Made This Reporting Period

Groundwater Pump & Treat System

In this reporting period Central Wire Inc. (CWI) continued the operation and maintenance of the groundwater extraction and treatment (P&T) system. During this period CWI completed the second round of jetting and acidifying in extraction well no, 2 (EW-2).

Table 1, attached, lists the average daily P&T volumes by month from January 2015 through December 2018. The average for December was 650,000 gallons per day (GPD). This value recognizes that EW-2 was off line from December 18 to December 26 as the liner screen and the re-jetting and re-acidification took place. EW-2 was on line before the end of the month. The maximum daily flow was 766,000 GPD.

Regarding measuring the flow from each well, CWI has a flow meter in the treatment facility measuring the total flow. CWI is in the process of replacing the inoperable flow meter in the manhole at EW-1. This should take place in January 2019. CWI will then have a measurement of the total flow and the flow in EW-1 and will calculate the flow in EW-2 by subtracting the total flow from the EW-1 flow meter reading.

Currently it is estimated that the flow from EW-1 is 235 GPM (338,400 GPD) and the flow from EW-2 is 290 GPM (417,600 GPD) for a total of 525 GPM (756,000 GPD). This can be more accurately determined after CWI receives and installs the new flow meter on EW-1.

The laboratory analytical report for the pump and treat effluent sample is attached. Samples were collected on December 17, 2018 and arrived at the Test America Laboratory on December 18, 2018 at 2.2° C.

The monthly NPDES sample met effluent limitations for pH, 1,1, t-Trichloroethane (TCA), Trichloroethene (TCE) and Tetrachloroethene (PCE). The electronic Discharge Monitoring Report (eDMR) for the month is attached to this report.

Ex. 6 Personal Privacy (PP) Samples and Well Usage

The Ex. 6 Personal Privacy (PP) sample Ex. 6 Personal Privacy (PP) was collected at the same time as the pump and treat effluent samples and sent to the analytical laboratory in the same batch. (Well no. 1 [irrigation] has been deactivated for the

winter.) There were no volatile organic compound detections found in the Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) The analytical data is in the same analytical report as the pump and treat samples *(12-2018 NPDES Analytical Report).* Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) sample locations are provided in Figure 1.

CWI Quarterly Extraction Well Samples

These samples are collected quarterly in the third month of the calendar quarter. Samples were collected in December and the results are provided in Table 2, attached, which shows the quarterly data back to the first quarter of 2014.

Since CWI will not get accurate flow information until January or February 2019, the estimated blended influent pump & treat concentrations have not been estimated.

EPA has requested that CWI provide information on EPA Maximum Contaminant Limits (MCL) exceedances, trends in concentration of major contaminants through time, and the implications for plume capture.

TCE has slightly exceeded its MCL in the past two quarterly samples at 5.7 and 5.8 μg/L, respectively. The levels of TCE had been slowly decreasing from a high of 15 μg/L in 2Q2014 to the 4Q2018 value of 5.8 μg/L.

For TCA, there have been no MCL exceedances and the values have ranged from 0.2 to 18 μg/L, well below the MCL of 200 μg/L. Recent samples (the past two years) have been in the 3.3 to 4.4 μg/L range. For 1,1- Dichloroethene (DCE), the value for this quarter slightly exceeded the MCL. For cis-1,2-DCE, this value exceeded the MCL (84 vs MCL of 70 μg/L).

For Extraction Well No. 2 (EW-2), TCE has exceeded the MCL in each of the 20 samples. Values range from 6.8 to 23 μg/L with no apparent trend, though the high of 23 μg/l was observed in 2Q2014 and the last four quarters have averaged 8.7 μg/L. For PCE the values range from anomalies of 0 and 1.7 μg/L to in the upper 20s and 30s in μg/L with no apparent trend. TCA values in EW-2 were all below the MCL and ranged from 2.9 to 54 μg/L. For DCE, all values but 3Q2017 were below the MCL of 7 μg/L. The 3Q2017 slightly exceeded the MCL at 9.1 μg/L. There were no issues with cis-1,2-DCE in EW-2.

Regarding potential effects of decreased pumping in EW-2, there does not appear to be a trend associated with the decreased production from EW-2. EW-2 has now been rehabilitated.

The decreased production in EW-2 did have implications for reduced plume capture, but CWI was focusing on increasing production in EW-2 as opposed to evaluating

the capture zone. Now that it has been rehabilitated CWI will place three piezometers in a line west of the well at 10 ft., 50 ft. and 200 ft from EW-2 and measure water levels with data loggers for two weeks while EW-2 is pumping. This information will be used to evaluate the capture zone of EW-2.

Ex. 6 Personal Privacy (PP) and CWI Pump & Discharge Wells at Ex. 6 Personal Privacy (PP)

McHenry County has only issued the pump and discharge permit. Per EPA's request, a copy of this McHenry County Department of Health water well permit was submitted under separate cover.

CWI followed up on the status of the permit for the replacement of the irrigation well with the McHenry County Department of Health and learned they did not have a copy of the Illinois Department of Health water well permit application signed by the well driller and the pump installer. That signed document was obtained in early January and forwarded to the McHenry County Department of Health.

CWI may never have to install the Ex. 6 Personal Privacy (PP) replacement irrigation well. In the recent CWI 2018 RCRA CMI Field investigation, CWI evaluated the groundwater between the 2016 location of the leading edge of the chlorinated plume and the **Ex. 6 Personal Privacy (PP)** The analytical data indicate that the plume has not significantly moved into that space, i.e., no MCLs were exceeded in any of the 27 samples (separate report to follow). It is CWI's intent to install the pump and discharge well as soon as permits and lease agreements are signed.

Distance drawdown calculations have shown that, at 800 gallons per minute, the drawdown will encapsulate the current irrigation well and draw down the water level at the irrigation well by 2.68 feet after one year and 4.3 feet after 30 years. There is still 1.27 feet of drawdown at a 3,000 foot distance after 12 months of pumping at 800 gpm.

IEPA has not reissued the CWI NPDES pump and treat permit which includes outfall no. 2 for the discharge from the pump and discharge well to be located at the South Branch Nursery. This permit was reapplied for in October 2017 and it expired on May 31, 2018. IEPA has issued two draft permits, but no final permit has been issued at this date. IEPA has indicated that CWI can continue to operate until the NPDES permit is issued. CWI continues to call regularly to determine the status of the permit.

Ex. 6 Personal Privacy (PP) Pumpage

Ex. 6 Personal Privacy (PP) has stored their pump engines for the winter season.

2 Summary of Validated Data and Results

Pump & Treat System Monthly NPDES Samples

The permit limitations and analytical results are shown in Table 3, below. There were no effluent limitation exceedances.

Table 3

Central Wire Union Illinois Pump & Treat Effluent Analytical Results

Parameter	Effluent Limitation (Daily Maximum), µg/L	Effluent Analytical Results, µg/L
1,1,1-Trichloroethane	20	0.37 J
Tetrachloroethene	20	0.43 J
Trichloroethene	20	0.88 J

J = Estimated value. Analyte detected at a level < the Reporting Limit (RL) and > or = to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

Table 4 tabulates and plots the trends in the effluent limited parameters of TCA, PCE and TCE. The results of the December grab sample were in the zone that has trended over 2018, i.e., < 1.5 mg/L, except for June.

This NPDES analytical report also has environmental analytical results for CWI's North and South Seepage Ponds. These ponds are Illinois EPA-regulated seepage ponds for CWI's rinse waters from the annealing process, non-contact cooling water, boiler blowdown and for storm water collection.

3 Upcoming Events/Activities Planned

– CWI will continue to operate the existing remediation systems. Effluent samples will be collected, analyzed and reported as required in our NPDES permit.

CWI is in the process of acquiring a flow meter for EW-1. When installed CWI can report the flows from each extraction well individually.

CWI has reapplied for the NPDES permit for this system adding a second outfall for the pump and discharge system and awaits permit issuance by IEPA. The current permit expired on May 31, 2018. IEPA has verbally informed CWI that they can continue to operate their pump and treat system under the expired permit until the

new permit is issued. The new permit has been public noticed and there have been requests for a public hearing. IEPA reissued the draft permit for its 30 day notice with the current effluent limitations and there were no additional comments.

CWI will submit a 2018 RCRA CMI Field Investigation Report and a RCRA CMI Semiannual Monitoring and Residential Well Sampling Report in January 2019.

CWI has received a draft lease agreement from Ex. 6 Personal Privacy (PP) for the land needed to construct and operate the pump and discharge well.

CWI will evaluate the capture zones of EW-1 and EW-2 once the flow meter for EW-1 is placed and CWI can access a driller for the placement of the three piezometers described above.

Samples will continue to be collected at the Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) every month when the irrigation pumps are operating, usually between May and November of each year.

4 **Anticipated Problem Areas and Recommended Solutions** – None.

5 **Key Personnel Changes** – None.

6 **Target and Actual Completion Dates** – This project has not deviated from the project schedule.